

## REMARKS

The Office is thanked for the careful consideration of pending claims 1, 2, 4-13, 15 and 20.

Claims 1, 2, 4-13, 15 and 20 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Chen et al. (USPN 6,261,679).

Representative claim 1 recites:

A liquid absorbent material comprising an open-cell polymeric foam material comprising either polysaccharide or polypeptide, the foam material comprising a distribution of pore sizes between 0 and 3  $\mu\text{m}$ , the foam material having an absorption rate at wetting of at least 0.4 ml/s for a round sample having a 50 mm diameter, a liquid distribution capacity at an inclination of 30° of at least 15 g/g, a liquid storage capacity of at least 9% measured through centrifuge retention capacity and a gel liquid absorption of at least 4 g/g measured by pore volume distribution, for synthetic urine test liquid.

The Office admits that "Chen is silent about the absorption rate, liquid distribution capacity, liquid storage capacity and gel liquid adsorption." However, the Office asserts that Chen teaches a product made by "essentially the same process" and that for prior art products produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. The Office relies on MPEP § 2112.01 in making this assertion.

However, applicants note that MPEP § 2112.01 continues to recite that:

When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not. ... Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433.

Applicants assert that the Chen products do not necessarily possess the presently claimed characteristics. Accordingly, a *prima facie* case of anticipation or obviousness has been rebutted.

In making the rejections, the Office asserts that:

Chen also teaches essentially the same process of: a) mixing fibers and binder resins (column 11, lines 47-55; and column 21, line 43 to column 22, line 25), b) foaming by gas injection or mechanical agitation (column 16, lines 10-24), c) optionally incorporating a crosslinking agent (column 29, line 20 to column 31, line 34), d) molding foamed mixture (column 26, lines 13-23), and e) freeze drying (column 17, line 66 to column 18, line 39) as the instant invention.

It is evident that the Office simply mixed and matched steps from throughout the specification of Chen. Step a) is taken from columns 11 and 21-22, Step b) is taken from column 16, Step c) is taken from columns 29-31, Step d) is taken from column 26, and Step e) is taken from columns 17-18. The Office has jumped all over the specification to "find" the alleged teaching. Moreover, the steps the Office cites are very generic and broadly stated. There is no specific teaching with the Office's citations of the precise manner, timing, amounts, temperatures, concentrations and so forth of conducting the combined process steps. One skilled in the art would have many variables to adjust and choose from which would directly affect the outcome of the resultant liquid absorbent material.

Clearly, following the steps as outlined by the Office could result in a huge variety of foams with a huge variety of properties. Thus, products produced according to the multiple variations of the process steps cited by the Office from Chen do not necessarily possess the presently claimed characteristics.

Moreover, as further evidence that the claimed invention is different from Chen, applicants again rely on the experimental data presented in the Declaration of Kent Malmgren submitted with the April 7, 2006 Request for Continued Examination.

As disclosed in the Declaration of Kent Malmgren, a specific embodiment of the Chen material was carefully reconstructed and tested in accordance with the teachings of Chen. See *Declaration of Kent Malmgren*, paragraphs 4-7.

Although, applicants maintain that Chen does not teach or suggest the present invention, the teachings of Example 3 of Chen were followed because they are the teachings in Chen that are closest to teaching allegedly essentially the same process as the presently claimed invention. In using Example 3, applicants are not asserting that Chen, as a whole, is limited to the teachings of Example 3. However, Chen, as a whole, does not teach anything but mixed and matched generic steps. In order to rely on a process in Chen, without wild speculation as to the manner, timing,

amounts, temperatures, concentrations and so forth of conducting the steps, applicants looked to the Examples of Chen. Example 3 was the most reasonable selection because of the use of CMC, an anionic polymer, and because of teachings of freeze drying and crosslinking.

Following the teachings of Example 3, it was found that the Chen material has the following properties, as compared to the values recited in claim 1:

Sample	Absorption rate (ml/s)	Liquid distribution capacity (g/g)	Storage capacity (%)	Pore volume distribution (g/g)
A	0.49	8.3	12	2.2
B	0.3	10.8	5	1.6
C	0.2	7.1	3	1.7
CLAIM 1	$\geq 0.4$	$\geq 15$	$\geq 9$	$\geq 4$

See *Declaration of Kent Malmgren*, paragraph 16.

Thus, following the closest teaching in Chen, the products produced still did not possess the presently claimed characteristics. The Office must concede that one skilled in the art, following the process steps outlined in the Office Action, will in fact, result in a liquid absorbent material that does not necessarily possess the presently claimed characteristics.

Therefore, the *prima facie* case has been rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. See MPEP § 2112.01. Accordingly, a *prima facie* case of anticipation or obviousness has been rebutted.

Moreover, because a *prima facie* case of anticipation has been rebutted, applicants' showings of unexpected results are relevant.

Unexpectedly, applicants have discovered a liquid absorbent material that is capable of balancing the claimed properties. The art does not teach or suggest such a material. It is an unexpected result to be able to balance liquid distribution capacity and storage capacity at satisfactory levels. More so, it is unexpected to be able to obtain satisfactory values for absorption rate, liquid distribution capacity, and storage capacity while also providing satisfactory gel liquid absorption.

Unexpectedly, the liquid absorbent materials as defined in the claims of the present application are substantially different than those disclosed by Chen and have different properties. Dissimilar to the present invention, Chen proclaims to be focused on a primarily fibrous absorbent structure in contrast to fiber-reinforced foams. Column 1, lines 63-65. The resulting large fibrous structure pore sizes (500 – 7,000  $\mu\text{m}$ ) offer relatively little capillary pressure. Column 42, lines 12-16. To remedy the low capillary pressure of the fibrous structure, Chen discloses the use of open cell foam binder in a manner to also increase capillary pressure. Thus, Chen is focused on using foamable binder for the additional purpose of simply storing capillary liquid. Chen does not suggest any other absorbent function for the open cell foam. Therefore, based on the disclosure of Chen, one skilled in the art would not be motivated and is not taught how to incorporate satisfactory gel liquid storage (measured by pore volume distribution) in an absorbent material.

In sum, as the Office admits Chen does not teach or suggest the presently claimed absorption rate, liquid distribution capacity, liquid storage capacity and gel liquid adsorption. The process of Chen does not necessarily produce products that have the same characteristics as the presently claimed product. There is no anticipation or obviousness. Moreover, applicants have demonstrated that the presently claimed product is unexpectedly able to balance the competing effects of the properties of the presently claimed product.

Accordingly, claims 1-2, 4-13, 15 and 20 are, thus, not anticipated or rendered obvious by Chen.

### Conclusion


Applicants believe all matters raised in the above referenced Office Action have been responded to and that the application is now in condition for allowance.

Should the Office have any questions regarding this Amendment, or regarding the application in general, the Office is invited to contact the undersigned at the number listed below in order to expedite prosecution of the application.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By:   
Travis D. Boone  
Registration No. 52,635

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620